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EXAMINER	
AMINZAY, SHAIMA Q	

ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 11/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/924,723	MIZUGUCHI, HIRONORI	
	Examiner	Art Unit	
	Shaima Q. Aminzay	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 August 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed August 8, 2006 with respect to the rejected claims 1-42 under Claim Rejections-35 USC 103(a) is persuasive, therefore, response to arguments with respect to rejected claims 1-42 is **moot**, and claims 1-42 rejection under Claim Rejections-35 USC 103(a) is withdrawn.

Claim Rejections – 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action.

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Larijani (Larijani et al., U. S. Patent 6,603,746).

Regarding claim 1, Larijani discloses a base station of a mobile communication system *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44)*, comprising: a communication monitor circuit for detecting quality deterioration of radio communication with mobile stations *(see for example, Figures 1-3, column*

4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54), detecting, evaluating and adjusting the radio communication quality (Communication monitor circuit) with the mobile stations), wherein: said communication monitor circuit comprises: a monitor unit for monitoring a communication state of said radio communication *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*, a adjusting unit coupled to said monitor unit for judging whether said communication state monitored by said monitor unit is worse than a predetermined state *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, column 9, lines 9-67, column 11, lines 29-44, Statistical Power Control (adjusting unit) connected to the Communication Monitor to adjust and calculate the communication parameters (determining the state) considering the predetermine values of the communication state parameters)*, and a notifying unit coupled to said adjusting circuit for notifying an external circuit of said quality deterioration when said adjusting circuit judges that said communication state is worse than said predetermined state *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7,*

lines 1-17, column 8, lines 22-44, column 9, lines 9-67, column 11, lines 29-44, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54), the processor notifying Statistical Power Control (adjusting unit) of detraction of quality and being greater or less than the predetermine values that is deteriorated (worse) than the predetermined value).

Regarding claim 6, Larijani discloses a base station of a mobile communication system *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44, the communication system with base station and a mobile station)* comprising: receivers for demodulating transmission signals transmitted from said mobile stations to produce demodulated signals *(see for example, Figure 1, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, the receivers and modulators receiving signals from the mobile stations and outputting modulated signals)*, signal-to-noise ratio determining circuits coupled to said receivers respectively for determining signal-to-noise ratios of said demodulated signals *(see for example, Figure 1, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54) are connected, the received signal is modulated and the signal-to-interference (signal-to-noise) ratio (58) is being determined)*, transmission power control bit generators coupled to said signal-to-noise ratio

determining circuits respectively for generating said transmission power control bit signals based on signal-to-noise ratios *(see for example, Figures 1-3, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54) are connected, the power control generator is connected to the S/I determining to calculate the power control bit signal based on the S/I)*; a communication state monitor circuit coupled to said receivers for detecting quality deterioration of a communication state of radio communication between said base station and said mobile stations *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*; and a transmission power bit adjusting circuit coupled to said communication state monitor circuit *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to adjust and calculate the communication parameters (determining the state) considering the predetermine values of the communication state parameters)* and said transmission power control bit generators for controlling said transmission power control bit signals

so as to suppress an increase of transmission power of said mobile stations when said communication state monitor circuit detects said quality deterioration *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to detect, adjust, calculate power transmission between the base station and mobile, and to eliminate excess power transmission).*

Regarding claim 14, Larijani a transmission power control system for use in a base station of a mobile communication system *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44, the communication system with base station and a mobile station)*, said base station including receivers for demodulating transmission signals transmitted from said mobile stations to produce demodulated signals *(see for example, Figure 1, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, the receivers and modulators receiving signals from the mobile stations and outputting modulated signals)*, signal-to-noise ratio determining circuits coupled to said receivers *(see for example, Figure 1, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54) are*

connected, the received signal is modulated and the signal-to-interference (signal-to-noise) ratio (58) is being determined), respectively, for determining signal-to-noise ratios of said demodulated signals and transmission power control bit generators connected to said signal-to-noise ratio determining circuits respectively for generating said transmission power control bit signals based on said signal-to-noise ratios *(see for example, Figures 1-3, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54) are connected, the power control generator is connected to the S/I determining to calculate the power control bit signal based on the S/I)*, said transmission power control system comprising: a communication state monitor circuit coupled to said receivers for detecting quality deterioration of a communication state of radio communication between said base station and said mobile stations *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*; and a transmission power bit adjusting circuit coupled to said communication state monitor circuit *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control*

(adjusting unit) connected to the Communication Monitor to adjust and calculate the communication parameters (determining the state) considering the predetermine values of the communication state parameters) and said transmission power control bit generators for controlling said transmission power control bit signals so as to suppress an increase of transmission power of said mobile stations when said communication state monitor circuit detects said quality deterioration *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to detect, adjust, calculate power transmission between the base station and mobile, and to eliminate excess power transmission).*

Regarding claim 22, Larijani discloses a method of controlling transmission power of mobile stations from a base station of a mobile communication system *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44)*, comprising: monitoring, at said base station *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54), detecting, evaluating and adjusting the radio communication quality (Communication monitor circuit) with the mobile*

stations), a communication state of radio communication between said base station and said mobile stations *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*; judging, at said base station, whether said monitored communication state is worse than a predetermined state *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, column 9, lines 9-67, column 11, lines 29-44, Statistical Power Control (adjusting unit) connected to the Communication Monitor to adjust and calculate the communication parameters (determining the state) considering the predetermine values* of the communication state parameters); and notifying, in said base station, an external circuit of said quality deterioration when said communication state is judged to be worse than said predetermined state *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, column 9, lines 9-67, column 11, lines 29-44, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54), the processor notifying Statistical Power Control (adjusting unit) of detraction of quality and being greater or less than the predetermine values that is deteriorated (worse) than the predetermined value).*

Regarding claim 27, Larijani a method of controlling transmission power of mobile stations of a mobile communication system by use of transmission power control bit signals transmitted from a base station *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44, the communication system with base station and a mobile station)*, comprising; demodulating transmission signals transmitted from said mobile stations to produce demodulated signals *(see for example, Figure 1, column 1, lines 7-11, lines 35-67; column 4, lines 44-46, lines 66-67, column 5, lines 1-20, the receivers and modulators receiving signals from the mobile stations and outputting modulated signals)*; determining signal-to-noise ratios of said demodulated signals *(see for example, Figure 1, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29)*; generating said transmission power control bit signals on the basis of said signal-to-noise ratios *(see for example, Figures 1-3, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54) are connected, the power control generator is connected to the S/I determining to calculate the power control bit signal based on the S/I)*; detecting, at said base station, quality deterioration of a communication state of radio communication between said base station and said mobile stations *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67,*

column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations); and controlling, at said based station, said transmission power control bit signals so as to suppress an increase of transmission power of said mobile stations when said quality deterioration is detected *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to detect, adjust, calculate power transmission between the base station and mobile, and to eliminate excess power transmission).*

Regarding claim 35, Larijani discloses a base station in a mobile communication system *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44, the communication system with base station and a mobile station)* comprising: .a receiver which demodulates transmission signals transmitted from plural mobile stations *(see for example, Figure 1, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, the receivers and modulators receiving signals from the mobile stations and outputting modulated*

signals), a communication state monitor, coupled to said receiver, which detects a deterioration of a communication state of radio communication between said base station and the plural mobile stations *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*; a transmission power control signal adjusting circuit, coupled to said communication state monitor *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to adjust and calculate the communication parameters (determining the state) considering the predetermine values of the communication state parameters)*, which controls transmission power control signals so as to decrease the transmission power of the plural mobile stations if said communication sate monitor detects the deterioration *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to detect, adjust, calculate power transmission between the base station and mobile, and to eliminate excess*

power transmission); and a transmitter *(see for example, Figure 1, transmitter (84))*, coupled to said transmission power control signal adjusting circuit, which transmits the transmission power control signal to the plural mobile stations *(see for example, Figure 1, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54) adjusting power to the mobile stations).*

Regarding claim 37, Larijani discloses a mobile station among plural mobile stations *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44, the communication system with base station and a mobile station in a CDMA system (among the plurality of mobiles))*, in a mobile communication system *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, the mobile communication)*, comprising; a transmitter which transmits a signal to a base station *(see for example, column 1, lines 7-23, lines 35-62, column 2, lines 48-57, column 4, lines 57-67, column 5, line 1, lines 41-44, column 6, lines 8-13, the mobile station transmitter transmits to base station)*; a receiver which receives *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 4, lines 57-67, column 11, lines 29-44, the mobile station(s) receives transmission power control from the base station*, from the base station, a transmission power control signal

directing to decrease a power of the signal to be transmitted to the base station in the case where a deterioration of a communication sate of radio communication between the base station and the plural mobile stations is detected at the base station *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65)*; and a transmission power controller which decides a transmission power of the signal to be transmitted to the base station based on the transmission power control signal *(see for example, Figure 1, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29)*.

Regarding claim 39, Larijani discloses a mobile communication system comprising a base station and plural mobile stations *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44, the communication system with base station and a mobile station in a CDMA system (among the plurality of mobiles))*, wherein said base station comprises: a receiver which demodulates transmission signals transmitted from said plural mobile stations *(see for example, Figure 1, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, the receivers and modulators receiving signals from the mobile stations and outputting modulated signals)*, a communication state monitor;

coupled to said receiver, which detects a deterioration of a communication state of radio communication between said base station and said plural mobile stations' *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*, a transmission power control signal adjusting circuit, coupled to said communication state monitor *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to adjust and calculate the communication parameters (determining the state) considering the predetermine values of the communication state parameters)*, which controls transmission power control signals so us to decrease the transmission power of said plural mobile stations if said communication sate monitor detects the deterioration *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to detect, adjust, calculate power transmission between the base station and mobile, and to eliminate excess power transmission)*; and a

transmitter *(see for example, Figure 1, transmitter (84))*; and a transmitter *(see for example, Figure 1, transmitter (84))*, coupled to said transmission power control signal adjusting circuit, which transmits the transmission power control signals to the plural mobile stations *(see for example, Figure 1, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54) adjusting power to the mobile stations)*, and each of said mobile stations comprises: a transmitter which transmits a signal to said base station *(see for example, column 1, lines 7-23, lines 35-62, column 2, lines 48-57, column 4, lines 57-67, column 5, line 1, lines 41-44, column 6, lines 8-13, the mobile station(s) transmitters' transmits to the base station)* a receiver which receives one of the transmission power control signals from the base station *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 4, lines 57-67, column 11, lines 29-44, the mobile station(s) receives transmission power control from the base station)*; and a transmission power controller which decides a transmission power of the signal to be transmitted to said base station based on the transmission power control signal received by said receiver *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, lines 57-67, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, column 11, lines 29-44).*

Regarding claim 40, Larijani discloses a method, for a mobile communication system comprising a base station and plural mobile stations *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44, the communication system with base station and a mobile station in a CDMA system (among the plurality of mobiles))*, comprising: demodulating transmission signals transmitted from the plural mobile stations; detecting, at the base station *(see for example, Figure 1, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, the receivers and modulators receiving signals from the mobile stations and outputting modulated signals)*, a deterioration of a communication state of radio communication between said base station and the plural mobile stations *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*; controlling, at the base station, power control signals so as to decrease the transmission power of the plural mobile stations if said communication sate monitor detects the deterioration *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control*

(adjusting unit) connected to the Communication Monitor to detect, adjust, calculate power transmission between the base station and mobile, and to eliminate excess power transmission); and transmitting the transmission power control signals to the plural mobile stations *(see for example, Figure 1, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54) adjusting power to the mobile stations)*.

Regarding claim 41, Larijani discloses a method, for a mobile communication system comprising a base station and plural mobile stations *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44, the communication system with base station and a mobile station in a CDMA system (among the plurality of mobiles))*, comprising: transmitting a signal to the base station *(see for example, column 1, lines 7-23, lines 35-62, column 2, lines 48-57, column 4, lines 57-67, column 5, line 1, lines 41-44, column 6, lines 8-13, the mobile station transmitter transmits to base station)*, receiving, from the base station *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 4, lines 57-67, column 11, lines 29-44, the mobile station(s) receives transmission power control from the base station*, a transmission power control signal directing to decrease a power of the signal to be transmitted to the base station in the

case where a deterioration of a communication state of radio communication between the base station and the plural mobile stations is detected at the base station *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to detect, adjust, calculate power transmission between the base station and mobile, and to eliminate excess power transmission)*; and deciding a transmission power of the signal to be transmitted to the base station based on the transmission power control signal *(see for example, Figure 1, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54) adjusting power to the mobile stations).*

Regarding claim 42, Larijani discloses a method for a mobile communication system, comprising a base station and plural mobile stations *(see for example, Figures 1-3, column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, column 11, lines 29-44, the communication system with base station and a mobile station in a CDMA system (among the plurality of mobiles))*, comprising; demodulating transmission signals transmitted from the plural mobile stations; detecting, at the base station *(see for example, Figure 1,*

column 1, lines 7-11, lines 35-67, column 4, lines 44-46, lines 66-67, column 5, lines 1-20, the receivers and modulators receiving signals from the mobile stations and outputting modulated signals), a deterioration of a communication state of radio communication between-said base station and the plural mobile stations *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*; controlling, at the base station, transmission power control signals so ms to decrease the transmission power of the plural mobile stations if said communication sate monitor detects the deterioration *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to detect, adjust, calculate power transmission between the base station and mobile, and to eliminate excess power transmission)*; transmitting the transmission power control signals to the plural mobile stations *(see for example, Figure 1, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control*

(54) adjusting power to the mobile stations); transmitting a signal to the base station; receiving one of the transmission power control signals form the base station *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 4, lines 57-67, column 11, lines 29-44, the mobile station(s) receives transmission power control from the base station)*; and deciding a transmission power of the signal to be transmitted to the base station based on the transmission power control signal received *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, lines 57-67, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, column 11, lines 29-44).*

Regarding claims 2 and 18, Larijani teaches all the imitations in claims 1, 14, and further, Larijani teaches wherein: said monitor unit is coupled to said receivers for monitoring total interference electric power of said demodulated signals as said communication state *(see for example column 1, lines 62-67, column 2, lines 1-7, column 3, lines 60-65, column 4, lines 27-37, column 9, lines 43-46)*, and said adjusting circuit judging that said communication state is worse than said predetermined state when said total interference electric power is equal to or larger than a predetermined threshold *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, lines 57-67, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, column 9, lines 9-67, column 11, lines 29-44).*

Regarding claims 3, 11 and 19, Larijani teaches all the imitations in claims 1, 6, 14, and further, Larijani teaches wherein: said monitor unit coupled to said signal-to-noise ratio determining circuits monitors said signal-to-noise ratios as said communication state *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*, and said adjusting unit judges that said communication state is worse than said predetermined state when the number of signal-to-noise*(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, lines 57-67, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, column 9, lines 9-67, column 11, lines 29-44)*, ratios each of which is smaller than a predetermined value, is equal to or larger than a predetermined threshold *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, lines 57-67, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, column 9, lines 9-67, column 11, lines 29-44)*.

Regarding claim 4, 12, and 20, Larijani teaches all the imitations in claims 1,

6, 14, and further, Larijani teaches signal-to-noise ratio determining circuits coupled to said receivers respectively for determining signal-to-noise ratios of said demodulated signals and transmission power control bit generators coupled to said signal-to-noise ratio determining circuits respectively for generating transmission power control bit signals on the basis of said signal-to-noise ratios *(see for example, Figures 1-3, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54) are connected, the power control generator is connected to the S/I determining to calculate the power control bit signal based on the S/I)*, wherein: said monitor unit, coupled to said transmission power control bit generators, monitors said transmission power control bit signals as said communication state *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*; and said adjusting unit judges that said communication state is worse than said predetermined state when the number of said transmission power control bit signals each of which require increase of transmission power is equal to or larger than a predetermined threshold *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 3, lines 13-33, column*

4, lines 44-46, lines 57-67, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, column 9, lines 9-67, column 11, lines 29-44).

Regarding claim 5, 13, and 21, Larijani teaches all the imitations in claims 1, 6, 14, and further, Larijani teaches wherein: said monitor unit, coupled to said receivers, monitors total interference electric power of said demodulated signals *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)* and the number of said mobile terminals communicating with said base station as said communication state *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, lines 29-33, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), and the connection made to the CDMA multi-path receiver(s), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*; and said adjusting unit judges that said communication state is worse than said predetermined state when a changing rate of a ratio of said total interference electric power to the number of said mobile terminals communicating with said base station is equal to or larger than a predetermined threshold *(see for example, column 1, lines 7-23, lines 35-*

46, lines 62-67, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, lines 57-67, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, column 9, lines 9-67, column 11, lines 29-44).

Regarding claim 7 and 15, Larijani teaches all the imitations in claims 6, 14, and further, Larijani teaches wherein said transmission power control bit generators generate the transmission power control bit signals which requires increase of transmission power of said mobile stations when signal-to-noise ratios are equal to or lower than a desired value *(see for example, Figures 1-3, column 9, lines 9-67, column 10, lines 1-41)*; and said transmission power control bit adjusting circuit decreases said desired value to suppress an increase of transmission power of said mobile stations when said communication state monitor circuit detects said quality deterioration *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, Statistical Power Control (adjusting unit) connected to the Communication Monitor to detect, adjust, calculate power transmission between the base station and mobile, and to eliminate excess power transmission).*

Regarding claims 8 and 29, Larijani teaches all the imitations in claims 6, 27, and further, Larijani teaches wherein: said transmission power control bit

adjusting circuit changes said transmission power control bit signals so that said transmission power control bit signals a require decrease of said transmission power of said mobile stations *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65).*

Regarding claims 9 and 30, Larijani teaches all the imitations in claims 6, 27, and further, Larijani teaches wherein said communication state monitor circuit comprises: a monitor unit for monitoring said communication state of said radio communication *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, the control processor (52), Maximum Selector (64), Integrator (60), detecting and evaluating the radio communication quality (Communication monitor) with the mobile stations)*, a adjusting unit coupled to said monitor unit for judging whether said communication state monitored by said monitor unit is worse than a predetermined state *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65, column 9, lines 9-67, column 11, lines 29-44, Statistical Power Control (adjusting unit) connected to the Communication Monitor to adjust and calculate the communication parameters (determining the state) considering the predetermine values of the communication state*

parameters), and a notifying unit coupled to said adjusting circuit for notifying said transmission power control bit adjusting circuit of said quality deterioration when said adjusting circuit judges that said communication state is worse than said predetermined state *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, column 9, lines 9-67, column 11, lines 29-44, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54), the processor notifying Statistical Power Control (adjusting unit) of detraction of quality and being greater or less than the predetermine values that is deteriorated (worse) than the predetermined value).*

Regarding claim 10, Larijani teaches all the imitations in claim 6, and further, Larijani teaches wherein: said communication state monitor circuit coupled to said signal-to-noise ratio determining circuits monitors said signal-to-noise ratios as said communication state *(see for example, Figure 1, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29)*; and judges that said communication state is worse than said predetermined state when the number of signal-to-noise ratios each of which is smaller than a predetermined value, is equal to or larger than a predetermined threshold *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, column 9, lines 9-67, column 11, lines 29-44, the control processor (52),*

Maximum Selector (64), Integrator (60), Statistical Power control (54), the processor notifying Statistical Power Control (adjusting unit) of detraction of quality and being greater or less than the predetermine values that is deteriorated (worse) than the predetermined value)..

Regarding claims 23, 28, and 31, Larijani teaches all the imitations in claims 22, 27, and further, Larijani teaches wherein: total interference electric power of said demodulated signals is monitored as said communication state *(see for example column 1, lines 62-67, column 2, lines 1-7, column 3, lines 60-65, column 4, lines 27-37, column 9, lines 43-46)*; and said communication state is judged to be worse than said predetermined state when said total interference electric power is equal to or larger than a predetermined threshold *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, lines 57-67, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, column 9, lines 9-67, column 11, lines 29-44)*.

Regarding claims 24 and 32, Larijani teaches all the imitations in claims 22, 27, and further, Larijani teaches wherein: said monitoring periodically monitors an average of said signal-to-noise ratios as said communication state *(see for example, column 3, lines 26-53, column 4, lines 22-37, column 8, lines 11-21, lines 44-57)*; and said communication state is judged to be worse than said

predetermined state when the number of signal-to-noise ratios, each of which is smaller than a predetermined value, is equal to larger than a predetermined threshold *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, column 9, lines 9-67, column 11, lines 29-44, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54), the processor notifying Statistical Power Control (adjusting unit) of detraction of quality and being greater or less than the predetermine values that is deteriorated (worse) than the predetermined value).*

Regarding claims 25 and 33, Larijani teaches all the imitations in claims 22, 27, and further, Larijani teaches determining signal-to-noise ratios of said demodulated signals *(see for example, Figure 1, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29)* and generating transmission power control bit signals on the basis of said signal-to-noise ratios, wherein: said transmission power control bit signals are monitored as said communication state *(see for example, Figures 1-3, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29)*; and said communication state is judged to be worse than said predetermine state when the number of said transmission power control bit signals *(see for example, column 1, lines 7-23, lines 35-46, lines 62-67, column 2, lines 53-57, column 3, lines 13-33, column 4, lines 44-46, lines 57-67, column*

6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29, column 9, lines 9-67, column 11, lines 29-44), each of which require increase of transmission power, is equal to or larger than a predetermined threshold *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, column 9, lines 9-67, column 11, lines 29-44, the control processor (52), Maximum Selector (64), Integrator (60), Statistical Power control (54), the processor notifying Statistical Power Control (adjusting unit) of detraction of quality and being greater or less than the predetermine values that is deteriorated (worse) than the predetermined value).*

Regarding claims 26 and 34, Larijani teaches all the imitations in claims 22, 27, and further, Larijani teaches wherein: total interference electric power of said demodulated signals and the number of said mobile terminals communicating with said base station are monitored as said communication state*(see for example column 1, lines 62-67, column 2, lines 1-7, column 3, lines 60-65, column 4, lines 27-37, column 9, lines 43-46)*; and said communication state is judged to be worse than said predetermined state when a changing rate of a ratio of said total interference electric power to the number of said mobile terminals communicating with said base station is equal to or larger than a predetermined threshold *(see for example, Figures 1-3, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-67, column 7, lines 1-17, column 8, lines 22-44, column 9, lines 9-67, column 11, lines 29-44).*

Regarding claim 36, Larijani teaches all the imitations in claim 35, and further, Larijani teaches wherein, said communication sate monitor monitors an interference power of the transmission signal received by said receiver *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65)*, and detects the deterioration of the communication sate based on the interference power *(see for example, Figure 1, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29).*

Regarding claim 38, Larijani teaches all the imitations in claim 37, and further, Larijani teaches wherein, the deterioration of the communication sate is detected based on an interference power of transmission signals *(see for example, Figures 1-3, column 1, lines 62-67, column 2, lines 53-57, column 3, lines 1-12, column 4, lines 44-53, lines 66-67, column 5, lines 1-20, column 6, lines 54-65, column 7, lines 7-9, column 8, lines 15-29, lines 58-65)*, from the plural mobile stations, received by the base station *(see for example, Figure 1, column 3, lines 13-33, column 4, lines 44-46, column 6, lines 66-67, column 7, lines 1-17, column 8, lines 15-29).*

Conclusion

The prior art made of record considered pertinent to applicant's disclosure, see PTO-892 form.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaima Q. Aminzay whose telephone number is 571-272-7874. The examiner can normally be reached on 7:00 AM -4:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mathew D. Anderson can be reached on 571-272-4177. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shaima Q. Aminzay
(Examiner)

MATTHEW ANDERSON
SUPERVISORY PATENT EXAMINER

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